

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for producing tyrosine hydroxylase-positive neurons, comprising the steps of:

- a) providing a human embryonic stem cell line co-cultured with fetal striatal cells; and
- b) contacting said embryonic stem cell line with a solution comprising at ~~least one soluble molecule~~ glial-derived neurotrophic factor expressed by fetal striatal cells, under conditions suitable for producing tyrosine hydroxylase-positive neurons.

2. (Original) The method of Claim 1, wherein said fetal striatal cells are astrocytes.

3. (Canceled)

4. (Original) The method of Claim 1, wherein said fetal striatal cells are separated from said human embryonic stem cell line by a semipermeable membrane.

5. (Canceled)

6. (Currently Amended) The method of Claim 1, wherein said ~~at least one soluble molecule~~ glial-derived neurotrophic factor is provided by conditioned medium from fetal striatal cell cultures.

7. (Original) The method of Claim 6, wherein said conditioned medium is free of said fetal striatal cells.

8. (Original) The method of Claim 1, further comprising contacting said human embryonic stem cell line with stromal cells.

9. (Original) The method of Claim 1, further comprising step c, enriching said tyrosine hydroxylase positive neurons.

10. (Original) The method of Claim 9, wherein said tyrosine hydroxylase positive neurons are enriched, by selecting colonies with a circumference greater than 4 mm.

11-15. (Canceled)

16. (Currently Amended) A method of alleviating Parkinson's disease symptoms in a patient with Parkinson's disease comprising:

- a) providing a cell culture produced by a method comprising contacting a human embryonic stem cell line co-cultured with fetal striatal cells with glial-derived neurotrophic factor ~~at least one soluble molecule~~ expressed by fetal striatal cells, under conditions suitable for producing tyrosine hydroxylase-positive neurons; and
- b) administering said cultured cells comprising tyrosine hydroxylase-positive neurons to the putamen of a patient with Parkinson's disease, under conditions suitable for alleviating Parkinson's disease symptoms.

17. (Canceled)

18. (Original) The method of Claim 16, wherein said alleviating Parkinson's disease symptoms is assessed by a technique chosen from the Unified Parkinson's Disease Rating Scale, the Schwab and England Scale, and the Core Assessment Program for Intracerebral Transplantation.

19. (Original) The method of Claim 18, wherein said patient has advanced Parkinson's disease.

20. (Currently Amended) A composition comprising at least one human embryonic stem cell co-cultured with human striatal cells, and medium comprising glial-derived neurotrophic factor.

21. (Original) The composition of Claim 20, wherein said glial-derived neurotrophic factor is a recombinant protein.

22. (Original) The composition of Claim 20, wherein said medium further comprises at least one soluble molecule expressed by stromal cells.